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Significance of Obstetrical Deaths in California for 1940

(Continued from last issue)

Discussion

From a detailed survey of the cases, there are some considerations which merit emphasis. The sulfonamide group appears to be just beginning to reveal its influence in puerperal infection. As mentioned earlier, the provisional maternal death rate in California of 2.8 per thousand live births is slightly lower than that of the preceding year. With a uniform decrease in various obstetrical death categories, it might be expected that the puerperal infection group would be increasing relative to other causes. That this is not occurring is probably due to the widespread use of the sulfonamide drugs.

Early registration to arrange for maintenance of social and financial, as well as physical needs, is urgent in precluding controllable ectopic and abortion deaths.

Preconceptional care apparently did not exist in this group of 313 obstetrical catastrophes. Prenatal visits occurred in 55 per cent but from the records some were perfunctory. Thus pelvis were infrequently measured and recorded, urine and blood vessel pressure observations were meagre. The assurance of an uncomplicated delivery is greatest when prenatal care is complete.

Local anesthesia was very infrequently used. Anesthesia is shown to be a potential peril. Vomiting with subsequent aspiration, spinal medication with cardiac decompensation, ether in toxemia and inadequately experienced anesthetists contribute to the unnecessarily large proportion of deaths by this cause.

Contraindications to operations are to be considered, perhaps equally with indications. For example, eclampsia is still being treated with Cesarean section

under general anesthesia. Few patients can tolerate both eclampsia and laparotomy. Most could have survived vigorous conservative medication for the eclampsia with operation deferred until the acute episode has subsided.

There is some evidence that a low flap section requires greater technical skill than the classical procedure. Thus, post-operative hemorrhage is slightly more apparent in this group. Less tardiness in securing consultation should reduce the improper indications for Cesarean section. After about twenty hours of labor there is no evidence that a low flap operation is a safe procedure. However, the classical section is not safe after the patient is established in labor. Potentially infected patients need a more extensive type of operation such as a Porro, peritoneal exclusion or extraperitoneal operation. None of the ante-partum bleeding deaths occurred with the initial hemorrhage. In all cases there was at least one warning hemorrhage, but few were immediately crossmatched or even typed. Plasma seems not to have been used in a single case.

Blood plasma after removal of the cellular component requires no matching and can be stored in sterile cool packages for a longer time than whole blood. It will restore the blood volume somewhat and because of availability by ease of storage can be a considerable factor in the control of post-hemorrhagic shock casualties.

Moreover, uterine inertia and subsequent postpartum uterine atony seem to be insufficiently appreciated by the attendants as well as the hospital staffs. In this study no data is presented of the not infrequent pituitrin ruptures of the uterus.

Morbidity would appear to be the larger problem, inasmuch as prevention of the former largely precludes mortality. Moreover, it is concerned with the living, their sometimes prolonged illness and occasional sequelae with attendant increased expense. From recorded hospital (Cornell, Washington University, University of Rochester) observations there is a ratio of fatality to morbidity (disability, often febrile, with an elevation of temperature to 100.4° F. on any two successive days) of approximately 1 to 40. Since morbidity records are available only by sampling, an estimate of the probable febrile and other disability might be suggested conservatively as 12,000 cases annually in California.

If the problem of obstetrical morbidity is to a greater degree significant than mortality there is yet one related and inseparable problem perhaps more important than either. The obstetrician recognizes the tenfold more numerous deaths of our most important national resources as a consideration that merits a greater proportion of our energy. With increased hazard for either mother or child the chance of a fatality for the other is greater. In this light a study of maternal mortality is indirectly a child and national welfare measure.

Recommendations

1. Establishment of qualified consultive assistance available upon request for every physician who accepts obstetrical cases.
2. Endorsement of the American College of Surgeons approval for all hospitals and homes accepting obstetrical cases.
3. Acceptance of post-graduate extension as well as revision courses at about ten year intervals for all who accept obstetrical patients.
4. Approval and establishment of a pathological service available for maternal and infant necropsies upon request by the attending physician.

Conclusions

1. The puerperal fatality rate (excludes undelivered and previable pregnancies) for 1940 in California is 19.3 per 10,000 live births.
2. The autopsy percentage is 46.0 of the total maternal deaths.
3. The maternal mortality rate decreased to 28 per 10,000 live births for 1940.
4. There was a warning hemorrhage in each reported antepartum bleeding case which terminated fatally.

5. It is estimated that there are over 12,000 instances of puerperal morbidity each year in California.

Doctors Emmeline Banks, Anita E. Faverman, Georgia Krusich, and Ellarene MacCoy contributed to this study by physician interviews and hospital record searches.

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TABLE IV

PROVISIONAL ESTIMATE FATALITY RATES FOR 10,000

Maternal fatality rate	$\frac{313}{168,000} = 18.6$	{ Total maternal deaths Total pregnancies
Pregn'cy fatality rate	$\frac{83}{168,000} = 4.94$	{ Previable maternal death Total pregnancies
Puerperal fatality rate	$\frac{215}{111,800} = 19.2$	{ Puerperal deaths Total deliveries
Maternal death rate	$\frac{313}{111,800} = 28$	{ Total maternal deaths Total deliveries

SUNBURN MAY CAUSE CANCER

Severe sunburn, incurred season after season, may cause cancer of the skin. Scientists of the National Cancer Institute of the U. S. Public Health Service produce skin cancer in animals by ultraviolet radiation—the element in sunshine which burns the skin. There is also circumstantial evidence that sunburn causes human skin cancer. Farmers and sailors, and other groups most exposed to sunshine, develop skin cancer most frequently. Further, human skin cancer develops most often on parts of the body constantly exposed to the sun. Blondes are more susceptible than brunettes. Skin cancer occurs least often in Negroes.

The ultraviolet radiations of sunlight are partially intercepted by dust and smoke. Sunlight in the country, therefore, is more dangerous than in the cities. At the beach or on snowy mountaintops sunlight is most dangerous. While occasional sunburn can not be said to cause skin cancer, it nevertheless severely damages skin tissue, and may cause serious illness.

National Cancer Institute scientists stress, however, that judicious exposure to sunlight is beneficial. It prevents rickets, aids tuberculous persons, and builds general body resistance. Sunshine is a rich source of vitamin D.

FATIGUE FROM LONG DRIVING HOURS CAUSES ACCIDENTS

The United States Public Health Service, in the National Institute of Health Industrial Hygiene Division, has made a study of fatigue in motor drivers who operate for long hours without rest. The study is designed to measure accurately the mental and nervous fatigue resulting from hours of driving under actual road conditions and was made at the request of the Interstate Commerce Commission.

It was determined that long hours of driving measurably decrease the driver's efficiency and render him an increasing hazard on the highway. The Institute's physicians, psychologists, biochemists and biometrists developed their techniques on 889 truck drivers examined in 1,200 test sessions. Drivers were tested in Baltimore, Nashville and Chicago. These tests covered speed of tapping, reaction-cordination time, simple reaction time, and manual steadiness. A single score was given each of the drivers on the basis of these tests. This score, in general, agreed with the results of several other tests given the drivers, including visual tests, tests of white blood cells and others.

Both rested drivers and men who had completed long drives were tested, with the rested drivers serving as a basis of comparison with those who were tired. It was determined that driving efficiency decreased most sharply after the first two or three hours and thereafter decreased gradually. The exact point where driving efficiency dropped below the safety line was not determined.

The Interstate Commerce Commission requires that truck and bus drivers be off duty eight hours after having driven 10 hours. The tests showed that reasonable limitation of hours of service of interstate truck drivers would reduce the number of drivers with low efficiency and, therefore, add to the interests of highway safety.

It is recognized, however, that truck drivers are a carefully selected group and are better able to withstand driving fatigue than the average motorist who makes few long trips. The conclusion was reached that safety requires the average motorist to avoid long, uninterrupted periods of driving.

In California one of the first local health regulations was passed in San Francisco which prohibited the shooting of buzzards and other birds that might consume carrion. In Sacramento, in 1850, an ordinance was passed which required the daily removal of garbage, waste and refuse. The epidemic of cholera that invaded Sacramento in 1850, and again in 1852, was the factor that caused the early passage of this legislation.

FOOD POISONING IS REPORTABLE

"Why are more food poisoning cases reported by laymen than by physicians?"

Why are the more reputable restaurants, hotel dining rooms and markets more often alleged to have served or sold the suspected food than the so-called beanery or the roadside stand?

Why does the victim often become violently ill and "almost die" immediately upon discovering a fly, spider or match folder in the food or drink he is ingesting, and consult his attorney instead of his physician regarding his gastroenteritis?

Although the incubation period for different forms of food infection varies a great deal, depending on the causative organism, why is it the victim is prone to incriminate one particular food purchased from one particular establishment?

Food poisoning (due to living bacteria or bacterial toxins) is reportable in California and is listed as such on the communicable disease report cards furnished to all physicians.

The Los Angeles City Health Department can not examine food samples for infective organisms unless the original suspected food is available for analysis. Vomitus and early stool specimens are also of value. In any outbreak early reporting expedites matters in assisting the health authorities to obtain specimens and to remove an infectious food from the market."—George Parrish, M.D., City Health Officer, Los Angeles.

NEW HEALTH OFFICER AT ISLETON

Dr. Godfrey Stewart has been appointed Health Officer of Isleton in Sacramento County. He succeeds the late Dr. John H. Leimback, who served in that capacity for many years.

MORBIDITY

Complete Reports for Following Diseases for Week Ending June 28, 1941

Chickenpox

496 cases: Alameda County 3, Alameda 1, Albany 4, Berkeley 10, Emeryville 1, Oakland 38, Contra Costa County 3, Fresno County 5, Fresno 16, Sanger 1, Humboldt County 1, Kern County 7, Bakersfield 2, Tehachapi 3, Kings County 1, Los Angeles County 43, Alhambra 5, Burbank 2, Compton 1, Culver City 1, El Monte 5, Glendale 10, Huntington Park 2, Inglewood 2, Long Beach 9, Los Angeles 66, Monrovia 10, Montebello 1, Pasadena 20, Pomona 8, Redondo 2, South Pasadena 1, Torrance 1, Lynwood 2, South Gate 6, Signal Hill 1, Bell 1, Madera County 1, Monterey 2, Napa 1, Orange County 4, Fullerton 5, Anaheim 2, Orange 2, Santa Ana 1, Corona 1, San Jacinto 1, Sacramento 24, San Diego County 12, Coronado 1, San Diego 48, San Francisco 31, San Joaquin County 15, Stockton 1, San Luis Obispo 1, Daly City 3, Redwood City 1, San Bruno 1, San Mateo 2, Santa Barbara 7, Palo Alto 2, San Jose 5, Santa Cruz County 1, Redding 1, Sonoma County 10, Santa Rosa 6, Stanislaus County 1, Modesto 2, Turlock 1, Red Bluff 1, Santa Paula 1, Yolo County 1.

Diphtheria

13 cases: Glendale 1, Los Angeles 2, Riverside 3, Indio 2, Sacramento 2, Lompoc 1, Siskiyou County 2.

German Measles

347 cases: Alameda County 1, Alameda 6, Oakland 5, Fresno County 3, Fresno 5, Humboldt County 1, Inyo County 1, Bakersfield 2, Kings County 15, Lassen County 1, Los Angeles County 44, Alhambra 4, Arcadia 1, Burbank 9, Compton 7, El Monte 2, Glendale 4, Huntington Park 1, Long Beach 5, Los Angeles 22, Monrovia 2, Montebello 1, Pasadena 10, Pomona 5, San Fernando 1, San Gabriel 1, San Marino 2, South Pasadena 2, Lynwood 1, South Gate 1, Monterey Park 2, Maywood 1, Madera County 1, Marin County 3, Larkspur 1, Sausalito 4, Monterey County 3, Orange County 6, Newport Beach 1, Orange 3, Santa Ana 1, La Habra 1, Laguna Beach 1, Sacramento County 1, Sacramento 8, Redlands 1, San Diego County 3, Chula Vista 2, La Mesa 1, National City 4, Oceanside 3, San Diego 23, San Francisco 29, San Joaquin County 4, Stockton 3, San Luis Obispo County 1, Paso Robles 4, San Luis Obispo 1, San Mateo County 3, Burlingame 1, Santa Barbara County 2, Santa Barbara 2, Santa Maria 3, Santa Clara County 2, San Jose 1, Santa Cruz 3, Shasta County 1, Solano County 1, Sonoma County 6, Santa Rosa 9, Sonoma 1, Ventura County 1.

Influenza *

358 cases: Oakland 1, Kern County 333, Los Angeles County 3, El Monte 2, Los Angeles 1, San Jacinto 1, San Francisco 1.

Malaria

3 cases: Winters 1, Yuba County 1, California 1.**

Measles

307 cases: Albany 1, Berkeley 5, Oakland 4, Butte County 1, Contra Costa County 2, Pittsburg 1, Fresno County 1, Fresno 2, Humboldt County 10, Lassen County 3, Los Angeles County 98, Alhambra 2, Burbank 6, Compton 2, Glendale 1, Glendora 1, Huntington Park 15, Long Beach 1, Los Angeles 27, Pasadena 1, Pomona 1, San Fernando 1, San Gabriel 3, San Marino 4, Santa Monica 3, South Pasadena 1, South Gate 7, Monterey Park 1, Bell 4, Gardena 1, Madera County 1, Madera 1, Marin County 1, Mendocino County 1, Merced 1, Monterey County 3, Monterey 1, Soledad 3, Napa County 4, Napa 6, Orange County 1, Santa Ana 1, Beaumont 2, Perris 1, San Jacinto 1, Sacramento 5, San Diego 12, San Francisco 1, San Joaquin County 1, Stockton 3, San Luis Obispo County 1, Paso Robles 2, Santa Maria 1, San Jose 1, Santa Cruz County 1, Watsonville 1, Solano County 4, Vallejo 1, Sonoma County 9, Petaluma 7, Santa Rosa 3, Stanislaus County 5, Modesto 2, Turlock 1, Ventura County 2, Oxnard 1.

Mumps

539 cases: Alameda County 1, Alameda 5, Oakland 2, Butte County 1, Contra Costa County 4, Fresno County 2, Clovis 1, Humboldt County 2, Kern County 7, Susanville 3, Los Angeles County 39, Alhambra 8, Arcadia 1, Burbank 13, Compton 1, Culver City 2, El Monte 1, Glendale 2, Glendora 1, Huntington Park 3, Inglewood 4, Long Beach 2, Los Angeles 75, Monrovia 1, Montebello 3, Pasadena 4, Pomona 8, San Fernando 2, San Marino 1, Santa Monica 3, South Gate 15, Monterey Park 3, Maywood 1, Bell 4, Madera County 5, Sausalito 2, Yosemite National Park 2, Mendocino County 1, Monterey County 1, Monterey 3, Orange County 22, Newport Beach 1, Orange 1, Santa Ana 5, La Habra 2, Riverside County 1, Corona 7, Sacramento County 1, Sacramento 3, Ontario 1, Redlands 2, San Bernardino 2, San Diego County 18, Coronado 1, Escondido 1, La Mesa 4, National City 2, San Diego 121, San Francisco 29, San Joaquin County 10, Lodi 3, Stockton 1, Daly City 2, Santa Barbara County 1, Lompoc 6, Santa Barbara 8, Santa Clara County 9, San Jose 2, Santa Cruz County 1, Santa Cruz 1, Shasta County 2, Sonoma County 6, Santa Rosa 4, Modesto 2, Oakdale 1, Sutter County 2, Ventura County 1, Oxnard 2, Woodland 6.

Pneumonia (Lobar)

32 cases: Berkeley 1, Oakland 2, Bakersfield 1, Los Angeles County 3, Burbank 1, Los Angeles 6, Pasadena 1, Bell 1, Monterey County 1, Napa County 1, Corona 2, Riverside 1, Sacramento 3, San Diego County 1, Escondido 1, San Diego 1, San Francisco 4, Stockton 1.

Scarlet Fever

71 cases: Albany 1, Emeryville 1, Oakland 2, El Cerrito 1, Fresno County 3, Fresno 2, Kern County 1, Bakersfield 1, Delano 1, Los Angeles County 4, Alhambra 2, Burbank 1, Glendale 4, Long Beach 3, Los Angeles 19, Pasadena 3, Merced 1, Newport Beach 1, Santa Ana 1, Sacramento 1, Redlands 1, San Diego 3, San Francisco 6, San Joaquin County 1, San Luis Obispo 1, Sutter County 1, Santa Paula 1.

Smallpox

No cases reported.

Typhoid Fever

4 cases: Fresno County 1, Covina 1, Madera County 1, San Diego 1.

* Delayed reports.

** Cases charged to "California" represent patients ill before entering the State or those who contracted their illness traveling about the State throughout the incubation period of the disease. These cases are not chargeable to any one locality.

Whooping Cough

584 cases: Alameda County 10, Alameda 2, Albany 2, Berkeley 11, Oakland 29, San Leandro 1, Contra Costa County 8, Fresno County 4, Fresno 9, Humboldt County 2, Bishop 1, Kern County 4, Delano 3, Kings County 3, Los Angeles County 103, Alhambra 5, Burbank 3, Claremont 1, El Monte 1, Glendale 8, Huntington Park 3, Inglewood 1, Long Beach 4, Los Angeles 28, Pasadena 13, Pomona 8, San Fernando 2, San Gabriel 2, San Marino 1, Santa Monica 3, South Pasadena 2, South Gate 4, Monterey Park 5, Maywood 2, Bell 2, Gardena 1, Madera County 1, Yosemite National Park 4, Monterey County 9, Pacific Grove 1, Orange County 6, Fullerton 2, Santa Ana 2, La Habra 3, Placer County 1, Corona 2, Sacramento 12, Ontario 1, San Bernardino 3, San Diego County 12, Chula Vista 2, Coronado 2, La Mesa 2, National City 14, San Diego 81, San Francisco 19, San Joaquin County 61, Manteca 3, Stockton 4, Redwood City 2, San Mateo 1, Santa Barbara County 6, Santa Barbara 3, Santa Maria 3, Santa Clara County 11, San Jose 2, Sunnyvale 1, Sonoma County 1, Petaluma 2, Modesto 1, Tuolumne County 1, Ventura County 5, Santa Paula 2, Ventura 1, Yolo County 4.

Meningitis (Epidemic)

2 cases: Oakland 1, Sonoma County 1.

Dysentery (Amoebic)

5 cases: Oakland 2, Fresno County 1, Claremont 1, Mountain View 1.

Dysentery (Bacillary)

16 cases: Los Angeles County 3, Los Angeles 4, Orange County 1, Sonoma County 4, Sutter County 4.

Pollomyelitis

7 cases: Alameda County 1, Los Angeles County 1, Los Angeles 1, Huntington Park 1, Bell 1, San Diego County 1, Santa Cruz 1.

Tetanus

2 cases: Fresno County 1, Compton 1.

Trachoma

2 cases: Sanger 1, Riverside 1.

Paratyphoid Fever

2 cases: Los Angeles County.

Plague

One case: Siskiyou County.

Typhus Fever

One case: Los Angeles

Jaundice (Epidemic)

4 cases: Sutter County.

Food Poisoning

12 cases: Oakland 1, Fresno County 3, Los Angeles 5, Montebello 2, San Francisco 1.

Undulant Fever

7 cases: Kern County 3, Long Beach 1, Monrovia 1, Porterville 1, Yuba County 1.

Coccidioides Granuloma

One case: San Francisco.

Epilepsy

24 cases: Oakland 1, Los Angeles County 2, Los Angeles 13, Monterey 1, Huntington Beach 1, San Francisco 5, Sonoma County 1.

Rabies (Animal)

6 cases: Los Angeles County 4, Compton 1, San Francisco 1.

"Knowledge of population trends enables us to foresee a rise in the number of persons requiring hospital care for mental disease because in future larger numbers will reach the ages at which mental disease is most apt to occur."—Frank G. Boudreau.

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